

p-Carbon RHIC Polarimeters Status Report

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for the CNI polarimetry group

March 22, 2013

- **p-Carbon**

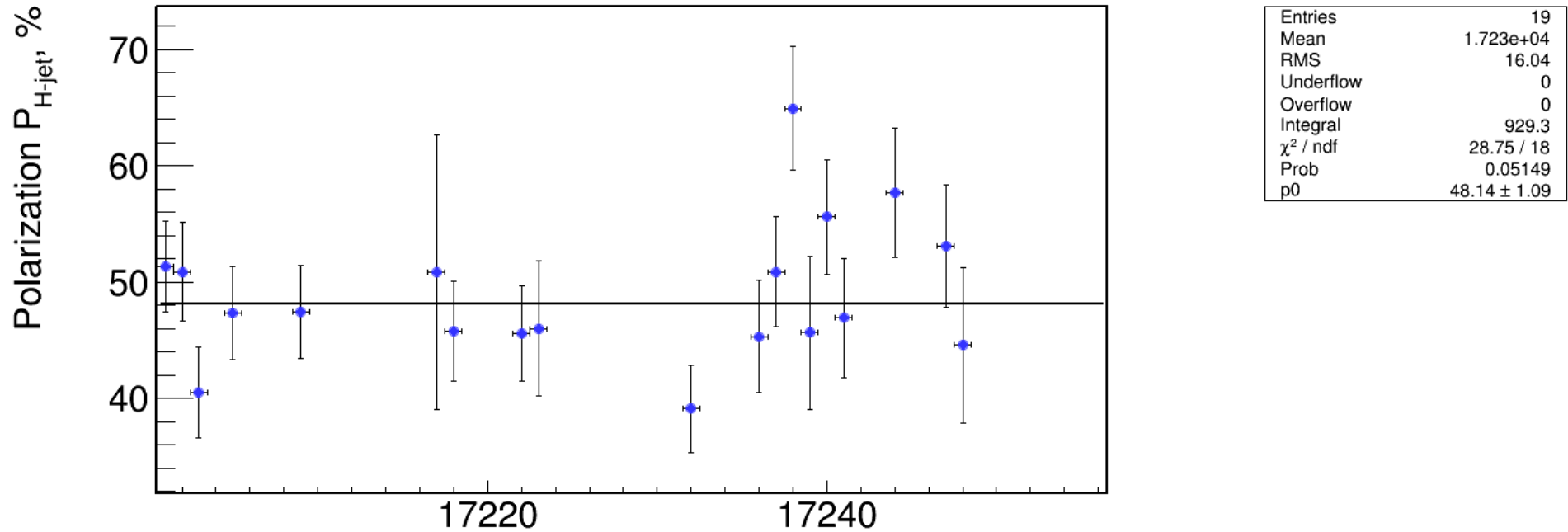
- Replaced all targets on Wednesday, March 20
- Only one target of 48 did not survive installation
- Stable running with minimal amount of noise
 - Monitoring empty bunches
- Some unstatistical bunch to bunch fluctuations in Blue
 - Investigating

- **H-Jet**

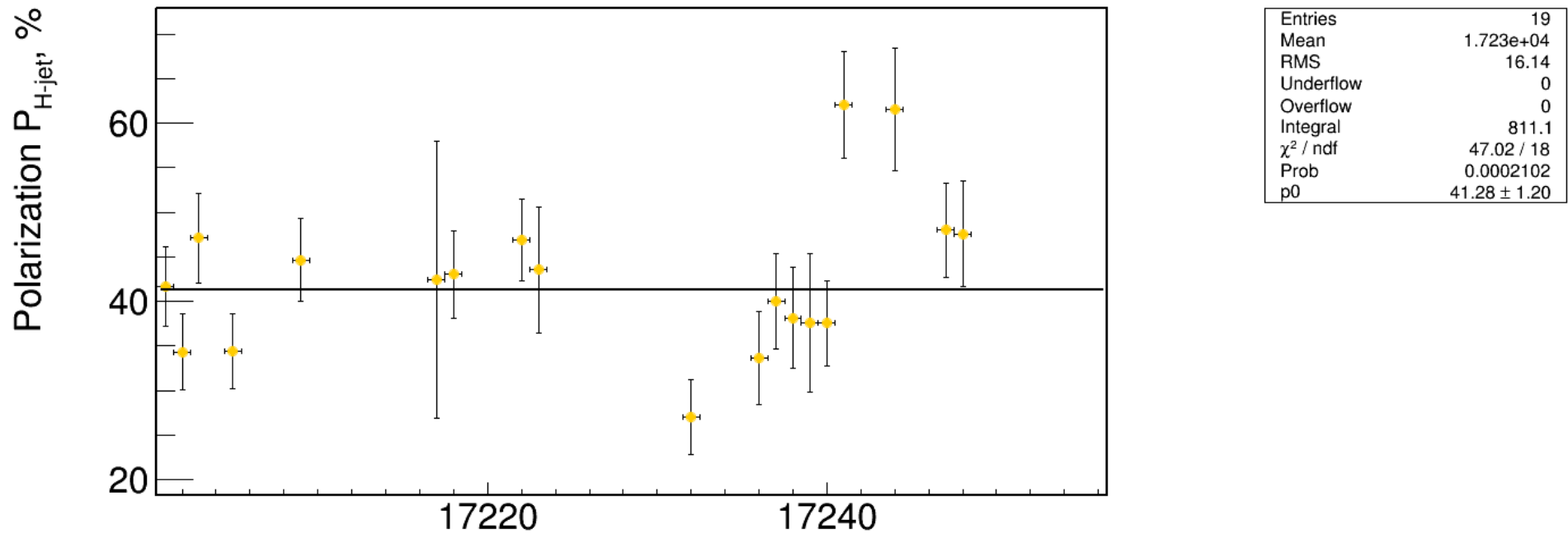
- Investigating outliers, fill-to-fill fluctuations
- Primary suspect is difference in number of “+” and “-” bunches

H-Jet Polarimeter

Fills 17201--17256, Analyzed Fri Mar 22 12:42:20 2013, Version 1920, dsmirnov

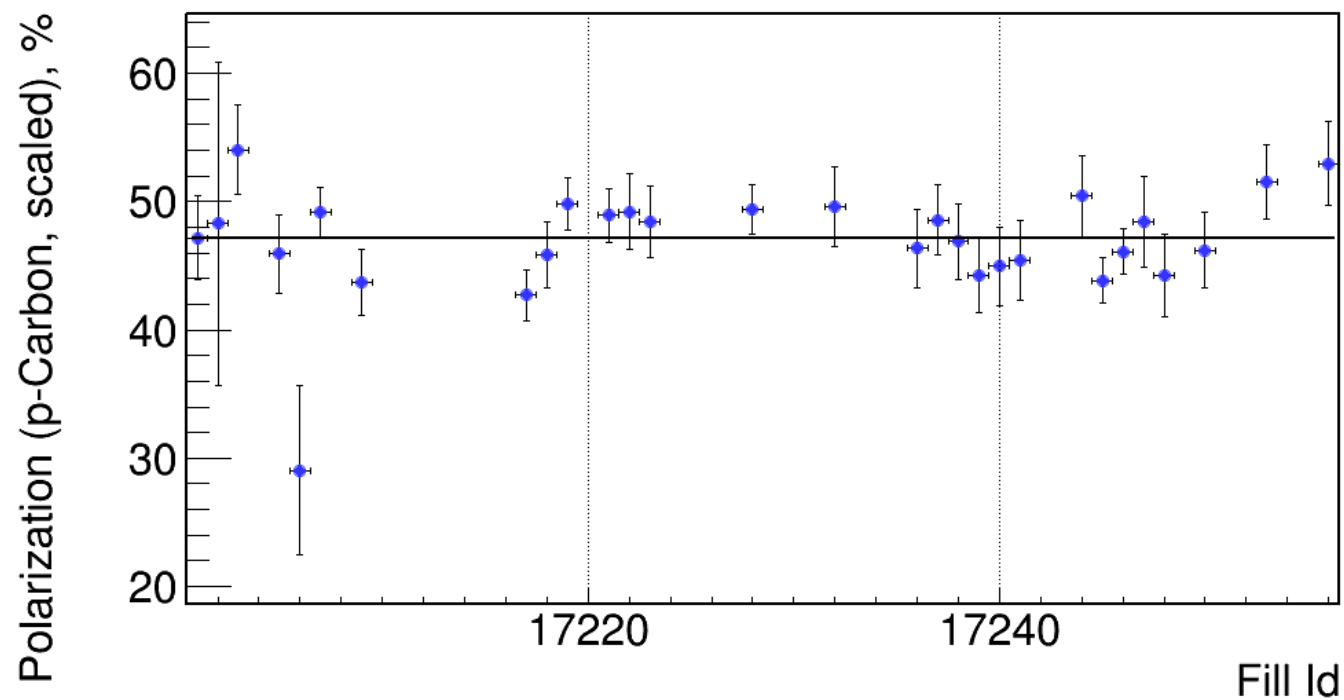


Fills 17201--17256, Analyzed Fri Mar 22 12:42:20 2013, Version 1920, dsmirnov



Fill Id

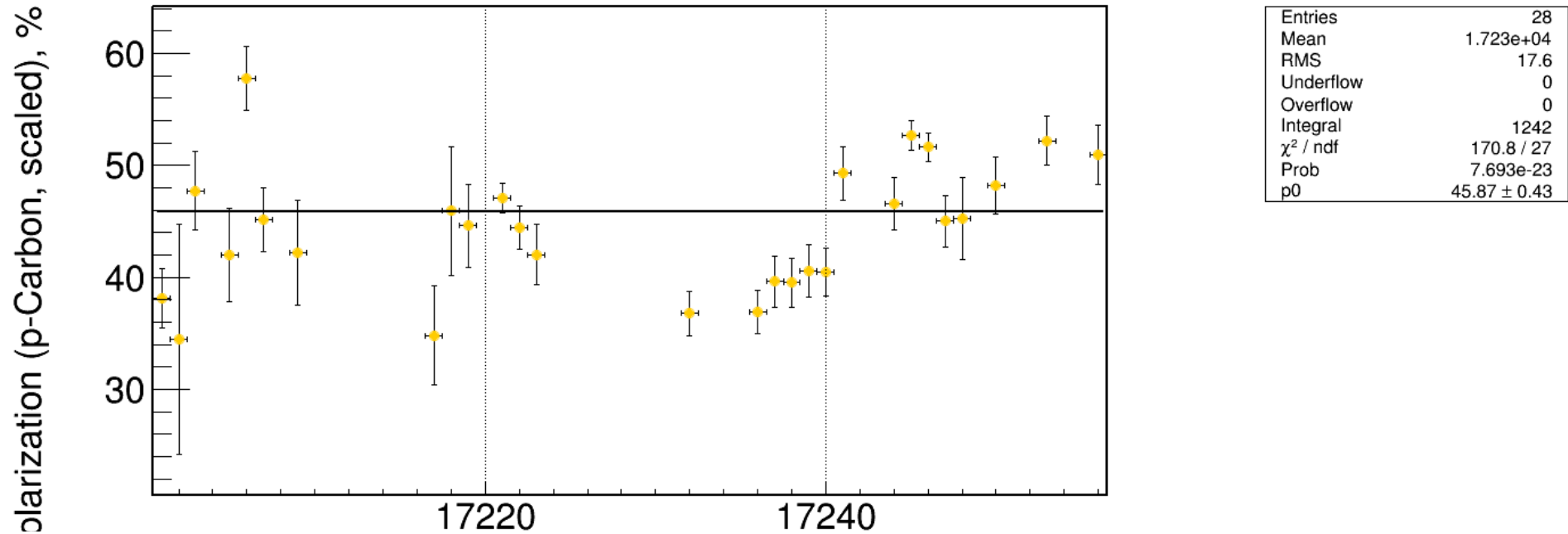
Fills 17201--17256, Analyzed Fri Mar 22 10:28:07 2013, Version 1920, dsmirnov



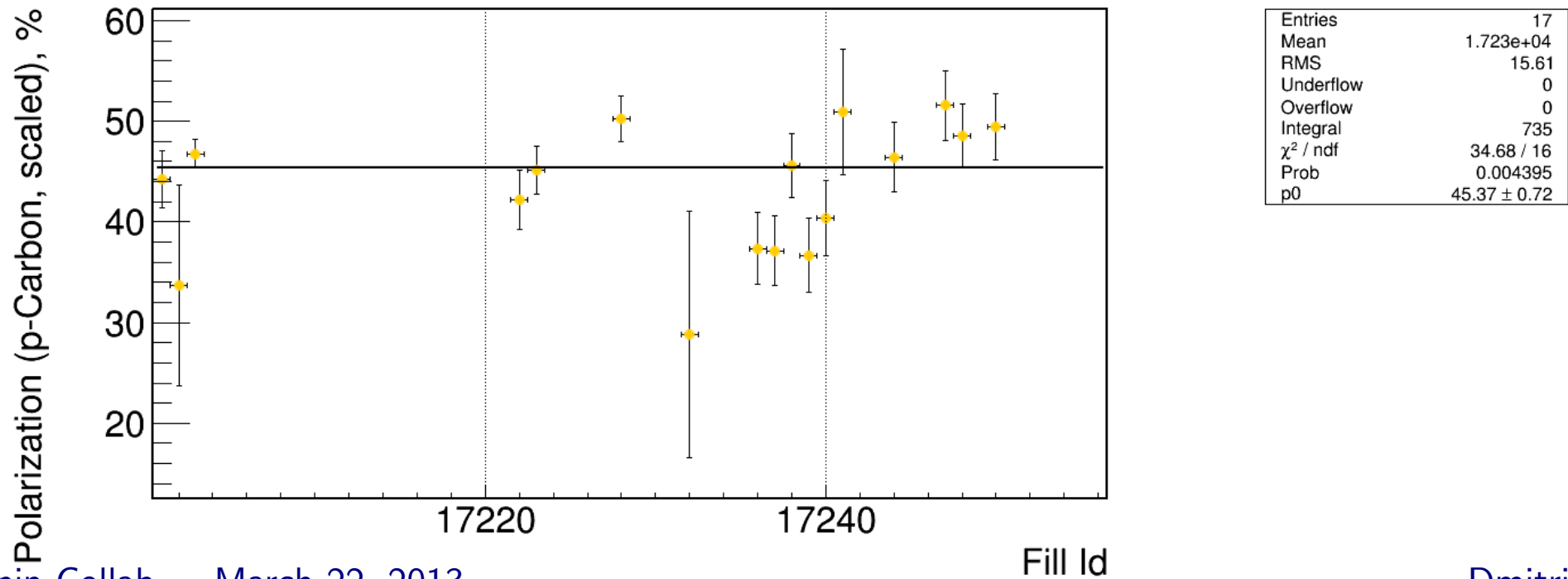
Entries	29
Mean	1.723e+04
RMS	17.1
Underflow	0
Overflow	0
Integral	1362
χ^2 / ndf	38.29 / 28
Prob	0.093
p0	47.18 \pm 0.49

Y1 and Y2 Polarimeters

Fills 17201--17256, Analyzed Fri Mar 22 10:28:07 2013, Version 1920, dsmirnov

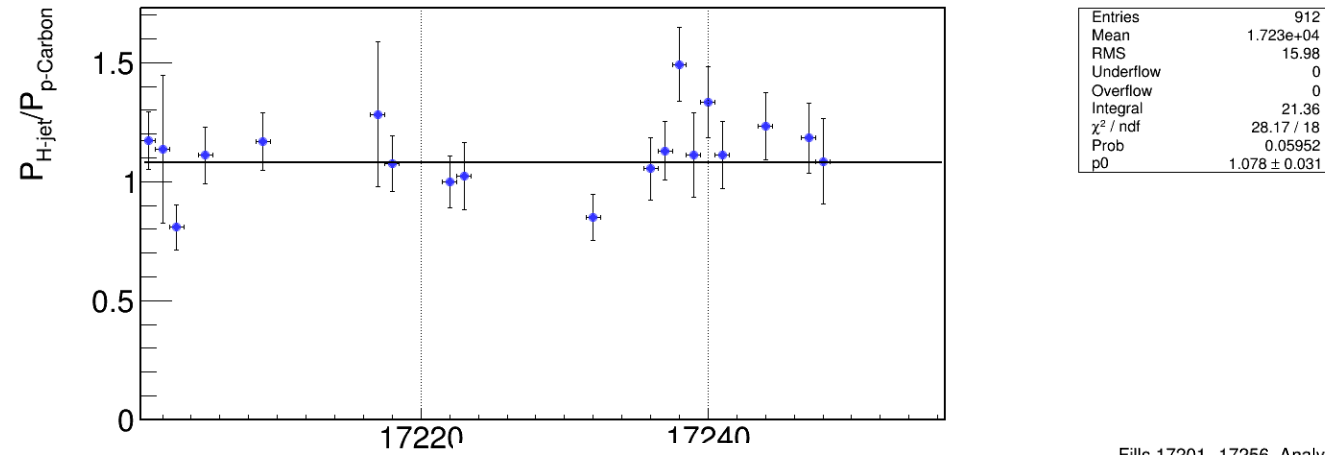


Fills 17201--17256, Analyzed Fri Mar 22 10:28:07 2013, Version 1920, dsmirnov

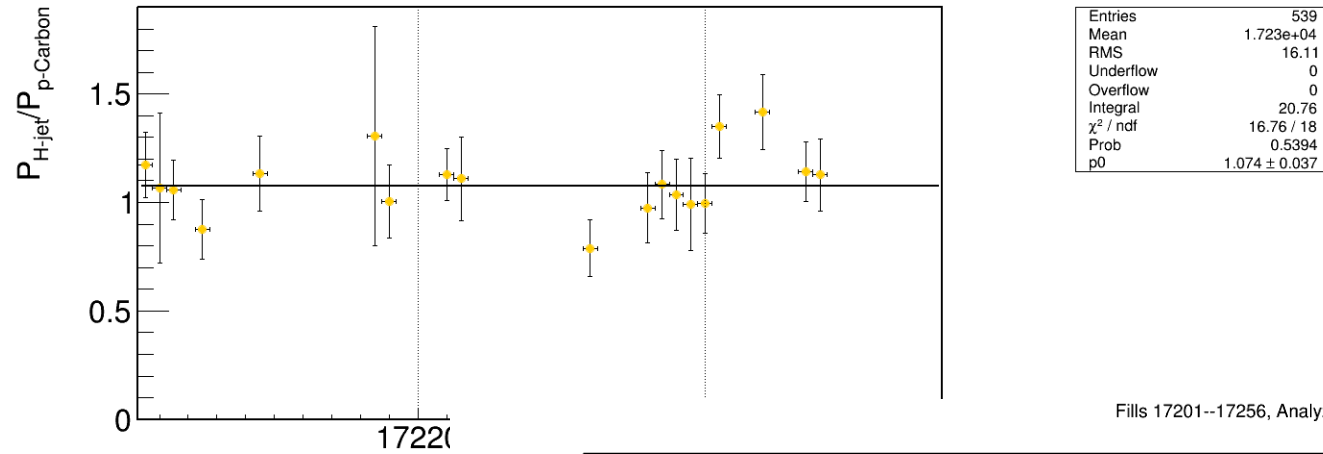


H-jet/p-Carbon Normalization

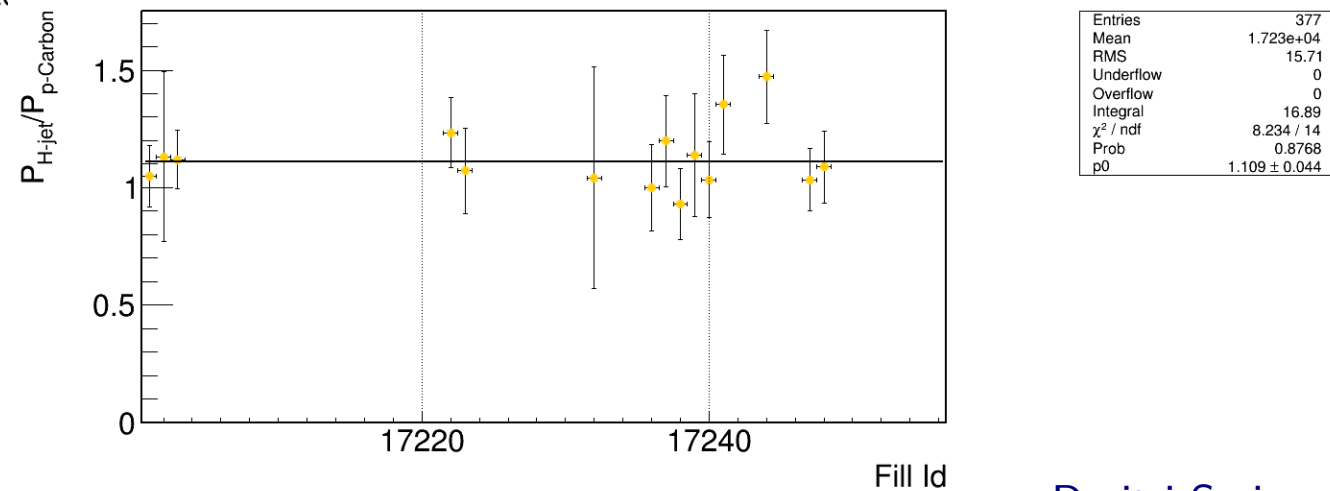
Fills 17201--17256, Analyzed Fri Mar 22 12:42:20 2013, Version 1920, dsmirnov



Fills 17201--17256, Analyzed Fri Mar 22 12:42:20 2013, Version 1920, dsmirnov



Fills 17201--17256, Analyzed Fri Mar 22 12:42:20 2013, Version 1920, dsmirnov



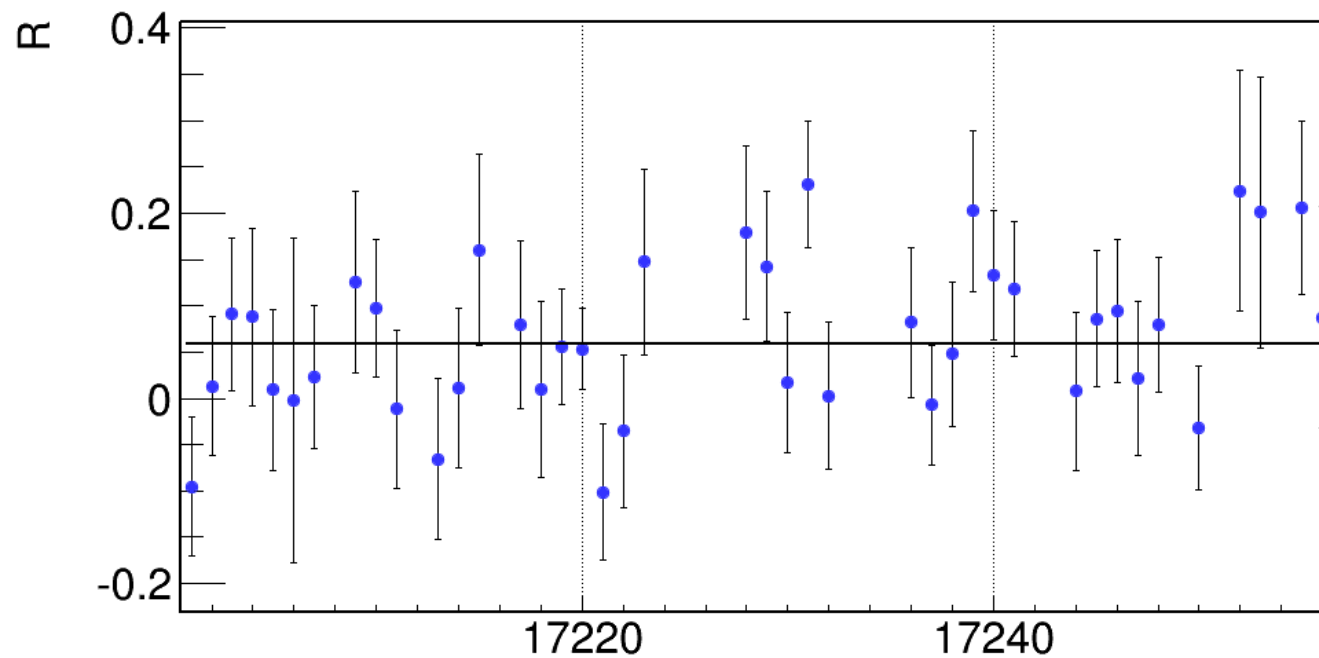
Fill Id

Run 13, 255 GeV	
B1U	1.08 ± 0.03
B2D	1.01 ± 0.10
Y2U	1.11 ± 0.04
Y1D	1.07 ± 0.04

Profile Polarization R, 24 GeV

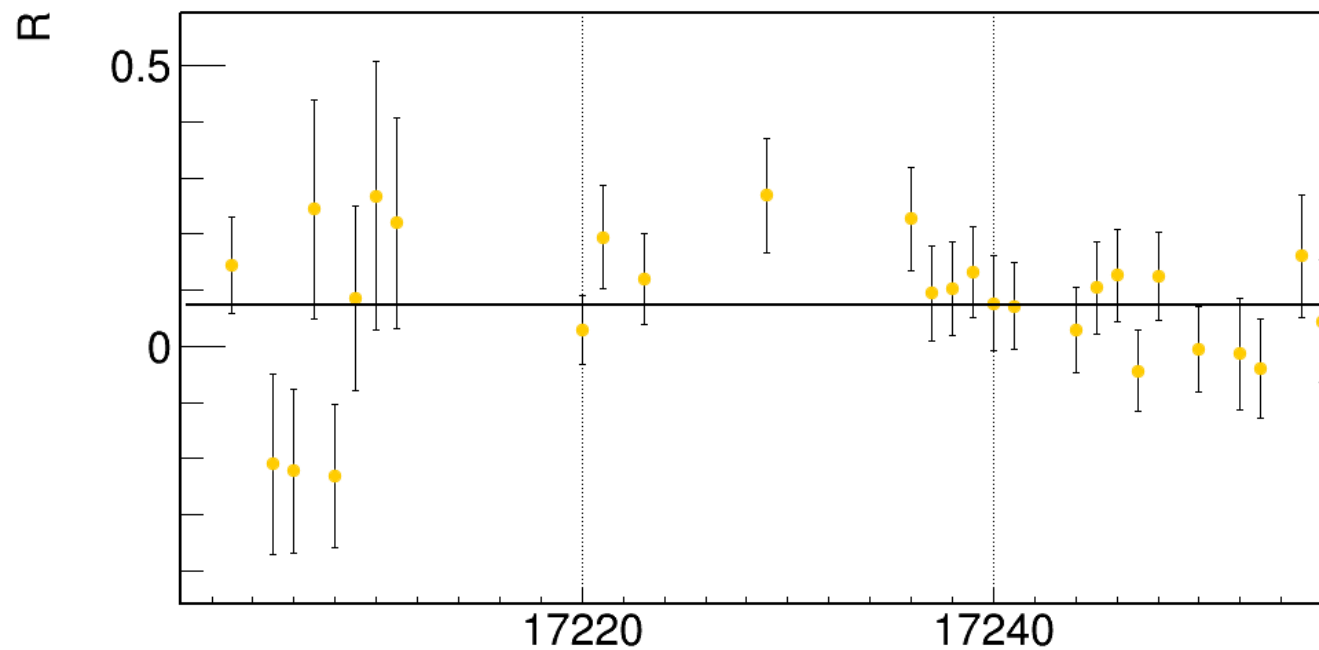
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Fills 17201--17256, Analyzed Fri Mar 22 12:42:20 2013, Version 1920, dsmirnov



χ^2 / ndf	40.8 / 40
Prob	0.4349
p0	0.05935 ± 0.01248

Fills 17201--17256, Analyzed Fri Mar 22 12:42:20 2013, Version 1920, dsmirnov



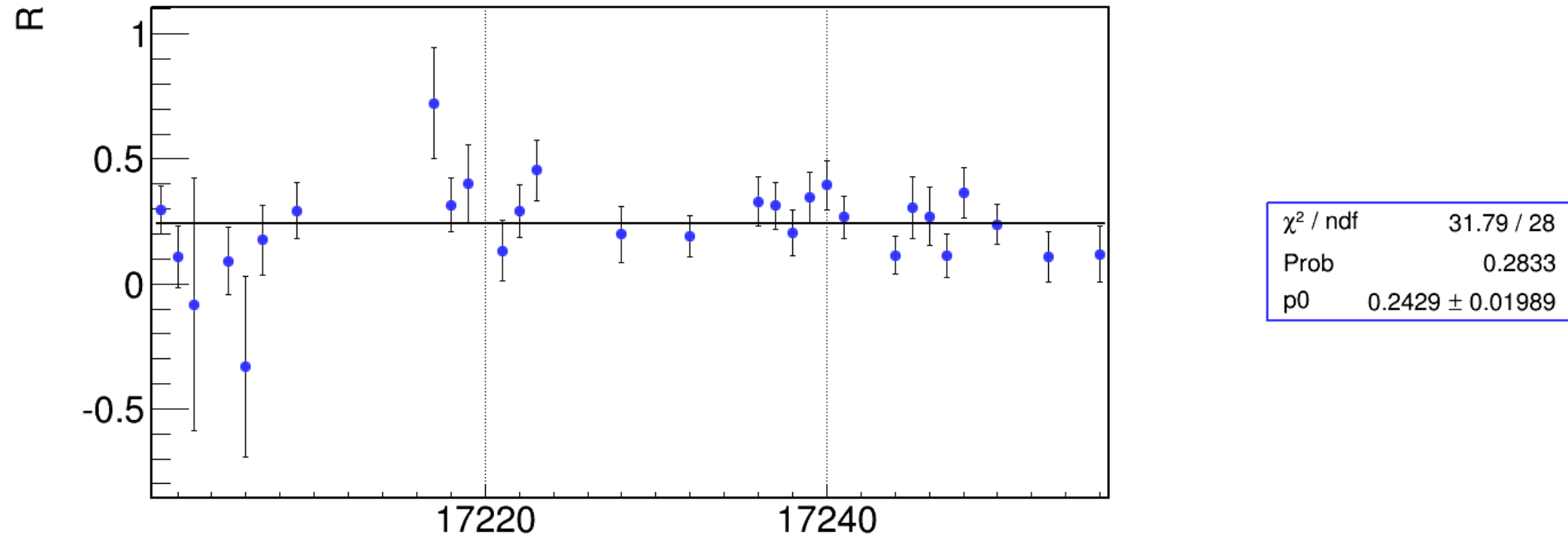
χ^2 / ndf	33.36 / 27
Prob	0.1855
p0	0.07341 ± 0.01754

Fill Id

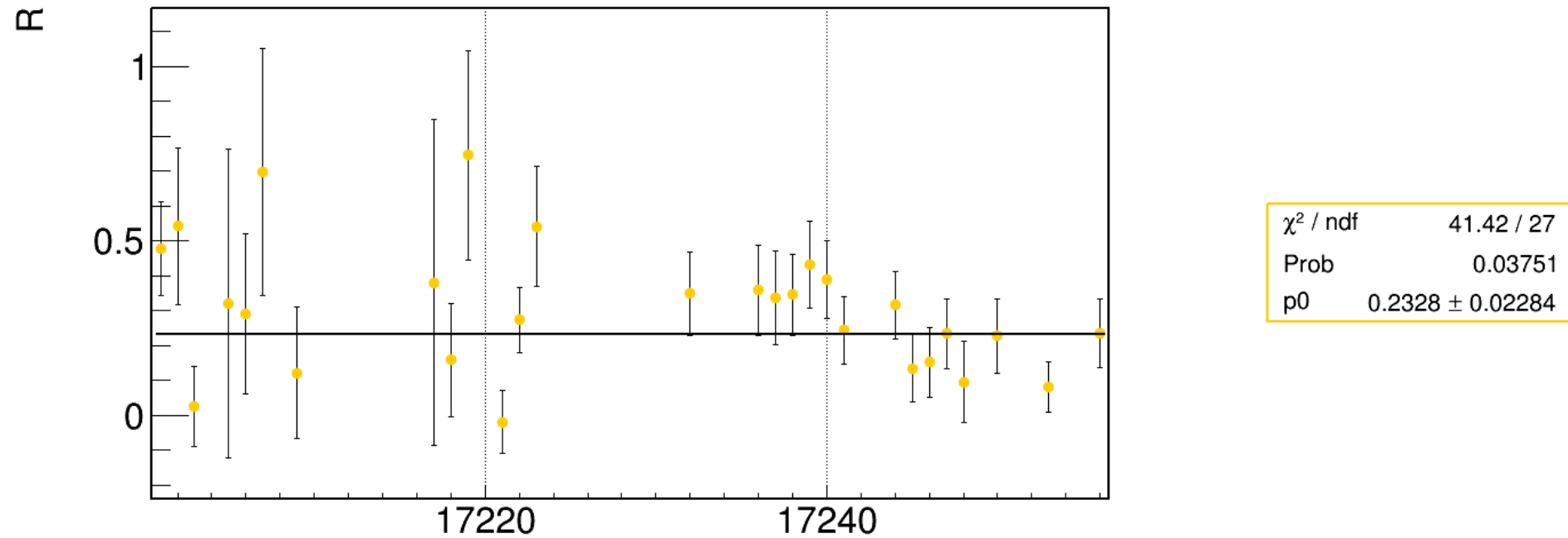
Profile Polarization R, 255 GeV

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Fills 17201--17256, Analyzed Fri Mar 22 12:42:20 2013, Version 1920, dsmirnov



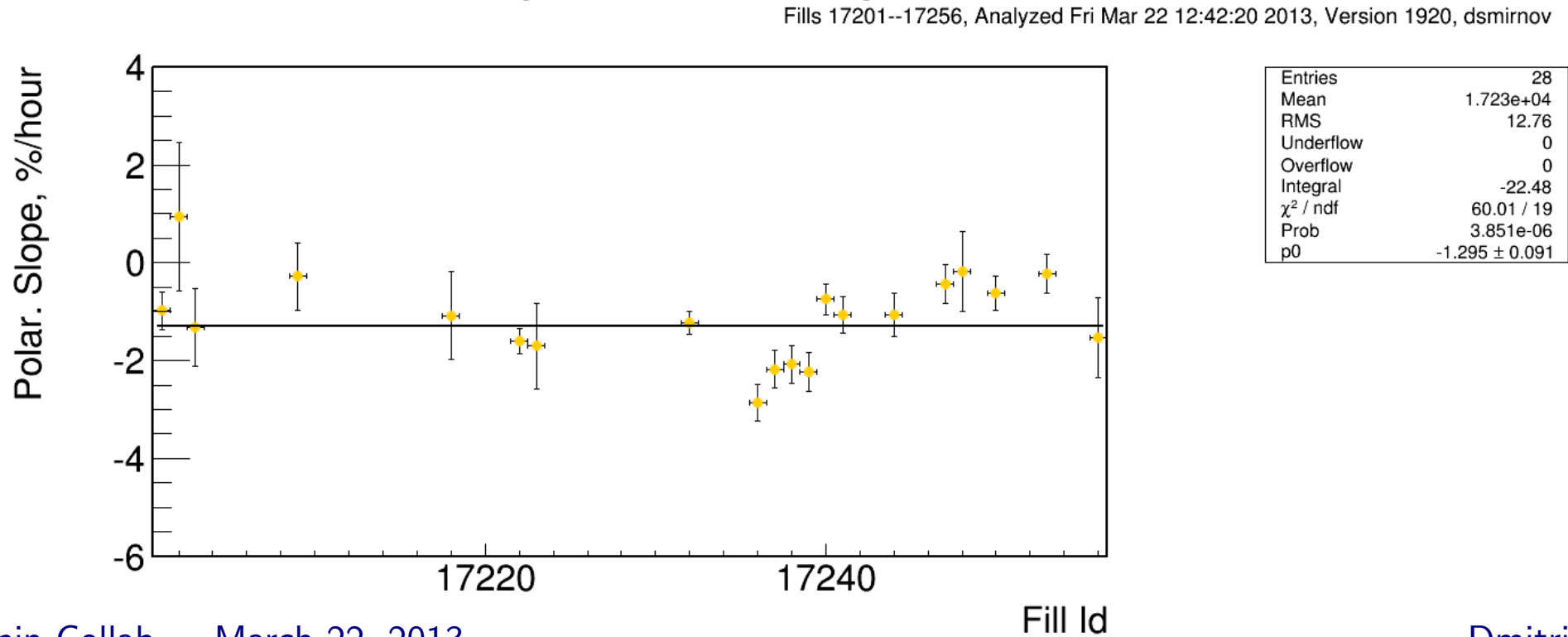
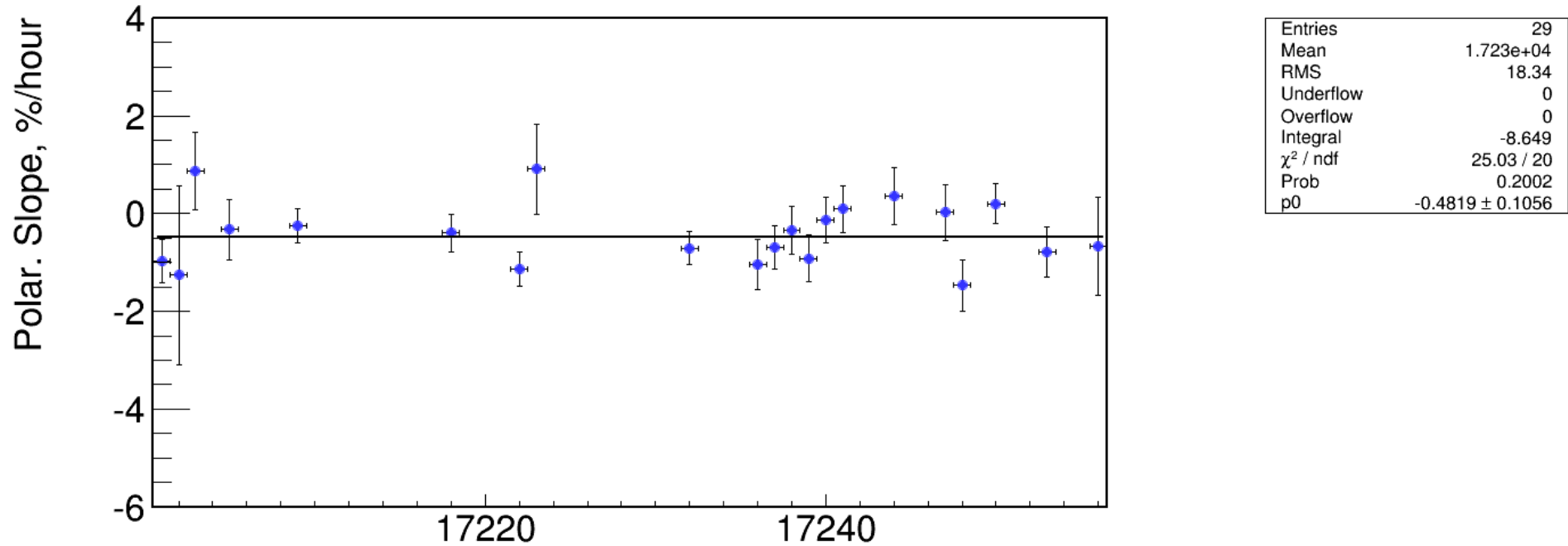
Fills 17201--17256, Analyzed Fri Mar 22 12:42:20 2013, Version 1920, dsmirnov



Fill Id

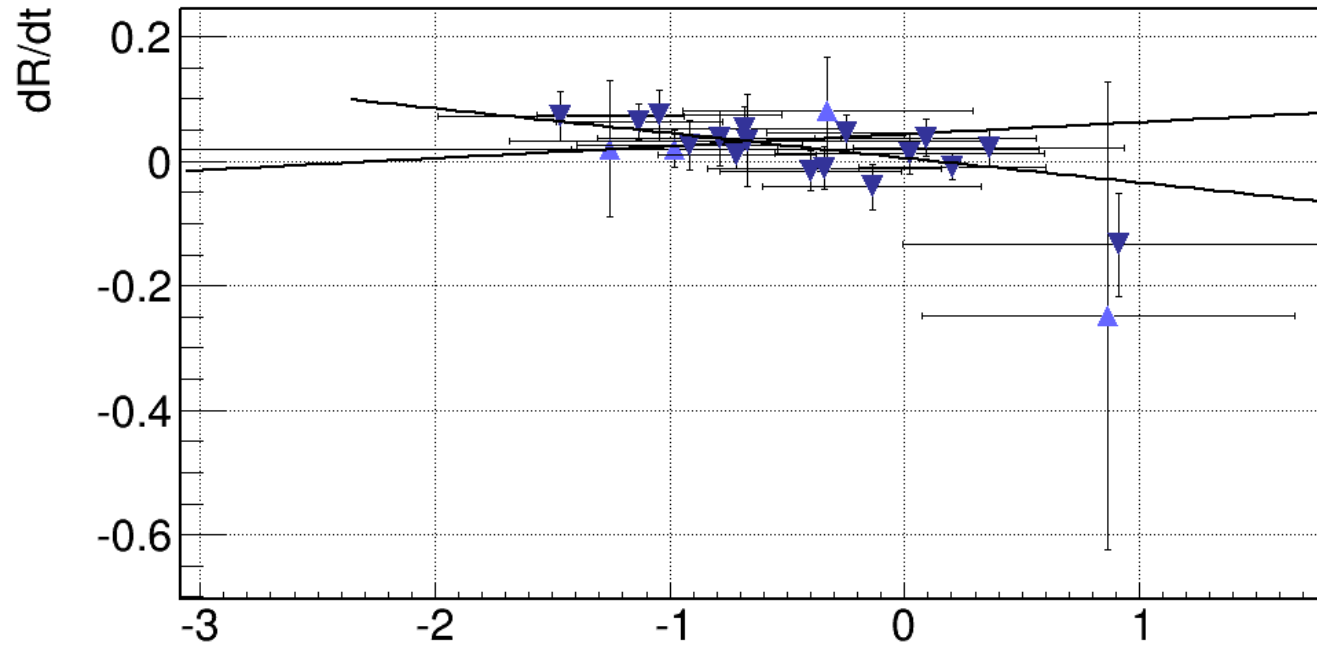
Polarization Decay, dP/dt

Fills 17201--17256, Analyzed Fri Mar 22 12:42:20 2013, Version 1920, dsmirnov



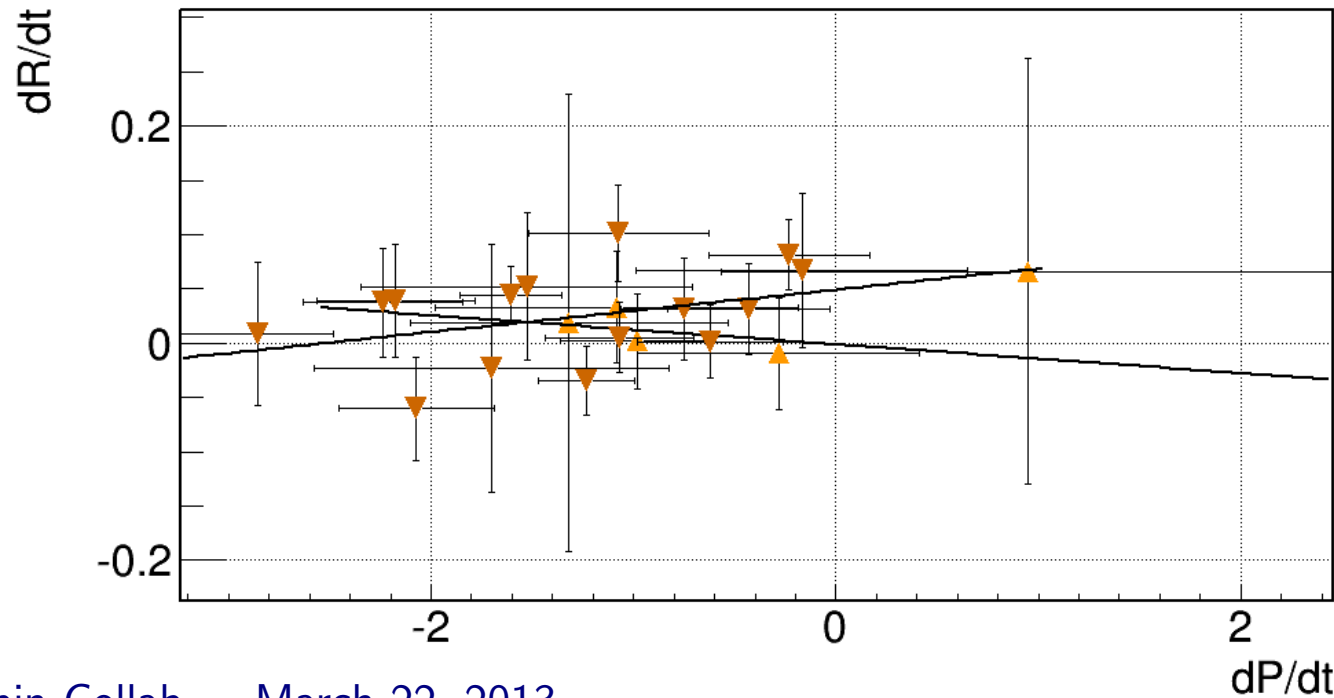
Polarization Decay, dP/dt vs Profile dR/dt

Fills 17201--17256, Analyzed Fri Mar 22 12:42:20 2013, Version 1920, dsmirnov



χ^2 / ndf	0.9666 / 2
Prob	0.6167
p0	0.0425 ± 0.1035
p1	0.01935 ± 0.1085
χ^2 / ndf	11.38 / 15
Prob	0.7253
p0	0.004611 ± 0.009893
p1	-0.03966 ± 0.01526

Fills 17201--17256, Analyzed Fri Mar 22 12:42:20 2013, Version 1920, dsmirnov



χ^2 / ndf	0.4257 / 3
Prob	0.9349
p0	-0.00144 ± 0.05761
p1	-0.01331 ± 0.06535
χ^2 / ndf	13.58 / 13
Prob	0.4038
p0	0.04862 ± 0.02181
p1	0.01948 ± 0.0161